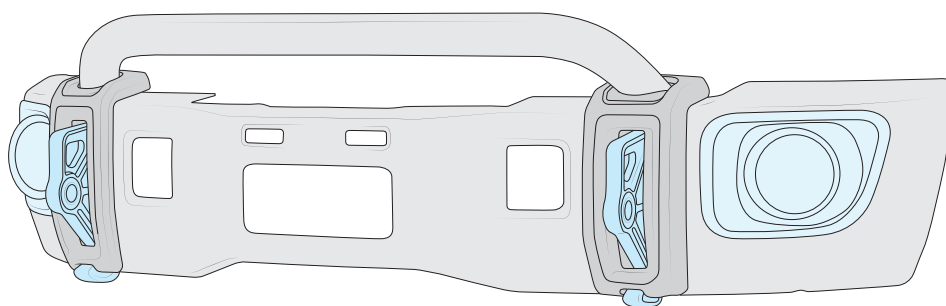




PREMIUM FRONT BUMPER FOR RAM 1500



AEV30304AC

Last Updated: 06/04/19

INSTALLATION GUIDE



PLEASE READ BEFORE YOU START

To guarantee a quality installation, we recommend reading these instructions thoroughly before beginning any work. These instructions assume a certain amount of mechanical ability and are not written nor intended for someone not familiar with auto repair.

INCLUDED PARTS	QTY	REQUIRED TOOLS
Bumper Center Assembly	1	Trim tool
Bumper Corner Kit	1	Socket and wrench Set
Bumper Tube Kit	1	3/8" or 1/2" Universal joint/swivel
Bumper Mounting Kit	1	Socket extentions
Fog Light Bezel Kit	1	Torque wrench
Winch Mounting Kit (optional)	(1)	Thin flathead screwdriver or pick
		Rotary tool or small body saw (if using the HD grill)
		3/8" Drill Bit
		Black RTV

NOTE: Installation of the AEV Front Bumper for Ram 1500 requires the use of Headlamp Filler Panels for Ram HD trucks.

Mopar PN:

1HH70TZZAD (Panel, RH Headlamp Filler - Paintable)

1HH71TZZAD (Panel, LH Headlamp Filler - Paintable)

55372918AC (Panel, RH Headlamp Filler - Textured Black)

55372919AD (Panel, LH Headlamp Filler - Textured Black)



REMOVAL OF FACTORY COMPONENTS — SAVE ALL HARDWARE

Process is the same whether equipped with a steel bumper or plastic fascia.

1. Remove the grill.
 - A. Remove the upper shroud by prying the six plastic push pins out (fig. 1).
 - B. Remove the four bolts holding the top of the grill (fig. 2).
 - C. Pull firmly on each side of the grill to separate the plastic retaining clips.

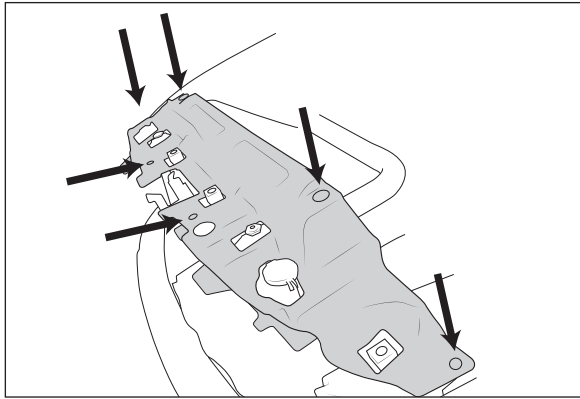


Figure 1

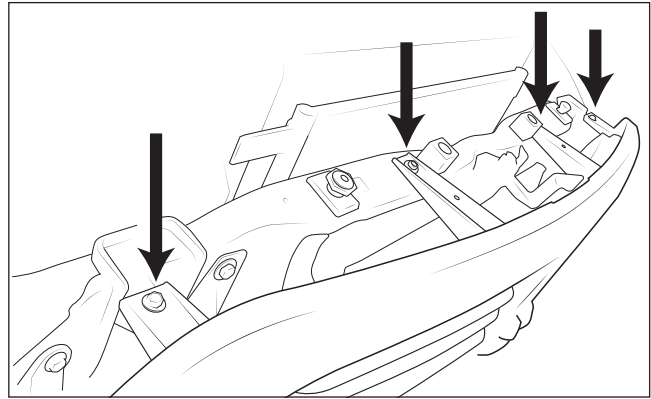


Figure 2

2. Remove the four push pins holding the lower shroud to the bumper (fig. 3).

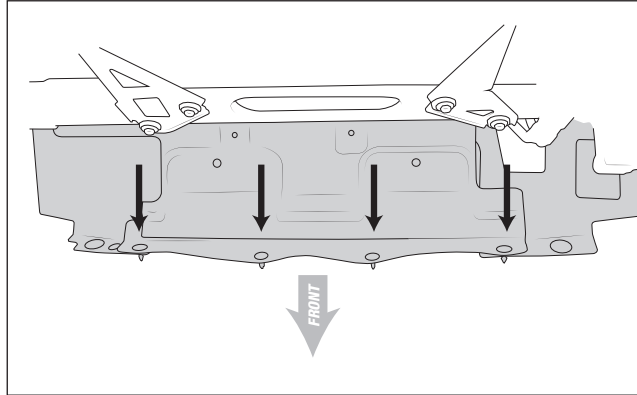


Figure 3

3. Remove both front wheel liners.
4. Unplug fog light and park assist harness at left front corner of bumper (if equipped). Leave harness attached to bumper.
5. Disconnect the Front Park Assist sensors (if equipped). Remove and SAVE sensors.
6. Remove fender to bumper trim/fascia bolts at top rear corner of bumper where it mates to fender (1 per side).
7. Remove tow hook bolts (if equipped).
8. Remove 3 nuts holding bumper mounting studs to front of each frame horn.



9. Use small flathead screwdriver or pick to unclip bumper trim/fascia from beneath headlights. 2 tabs per side (fig. 4).



Figure 4

10. Remove entire bumper/fascia assembly from front of vehicle.
11. Unbolt plastic supports from vehicle below headlights and grill opening.

PREPARE VEHICLE FOR BUMPER INSTALLATION

GRILL PREPARATION:

NOTE: If using HD grill follow steps in this section. If re-using factory grill skip to next section

1. Place 1500 grill face down on table. Disassemble the grill to remove the molded air diverters.
2. Use rotary tool or body saw to cut and modify air diverters as shown (fig. 5-6). Clean and smooth cut edges.



Figure 5: Right side Before and After

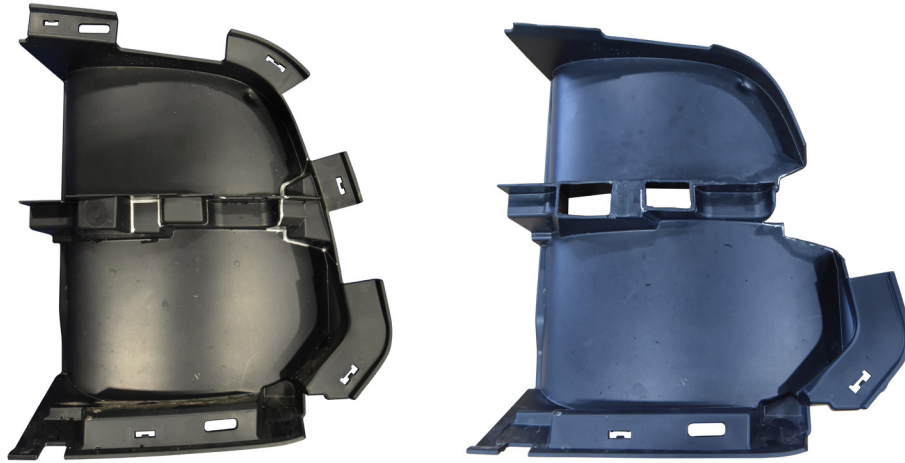


Figure 6 Left Side Before and After

3. Install air diverter brackets to vehicle using factory hardware as shown (fig. 7).

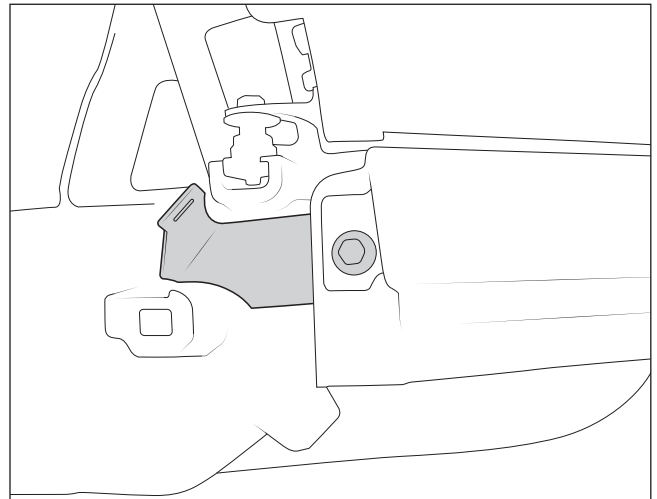
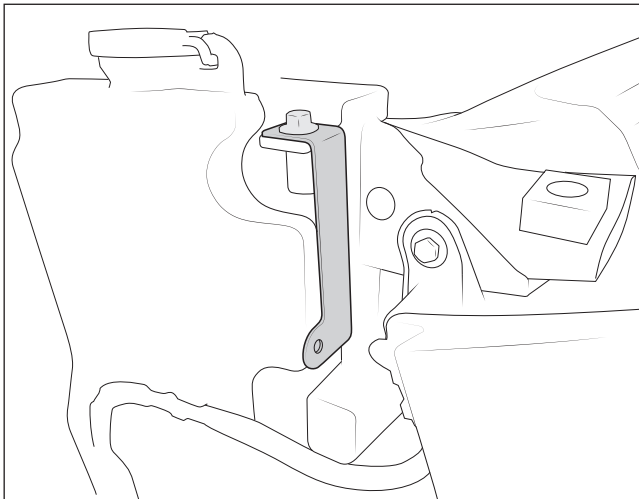


Figure 7 Left: Upper Bracket Right: Lower Bracket



4. Hold trimmed air diverters up to new brackets, make sure they sit properly with radiator opening, and mark hole locations for push fasteners. Drill 1/4" holes in diverters and install fasteners (fig. 8).

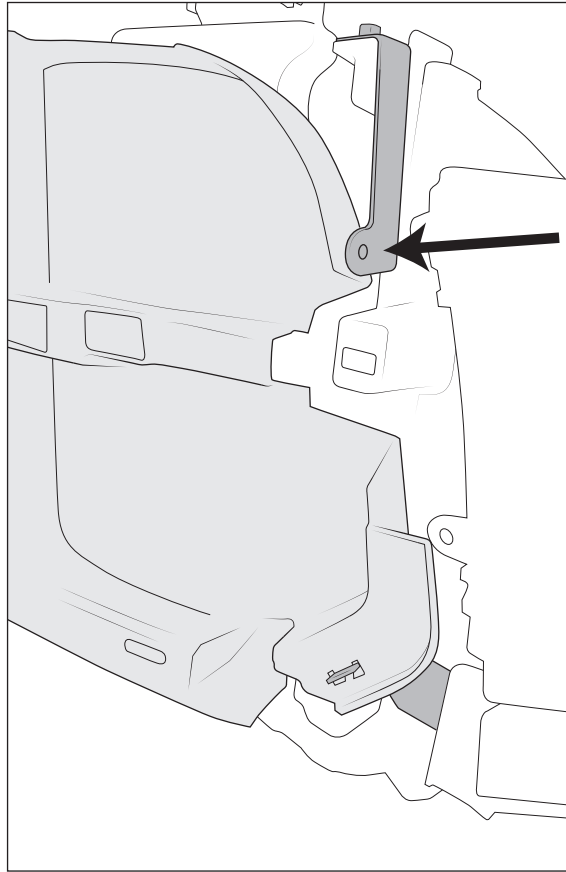


Figure 8

5. Drill additional 1/4" holes on inboard sides of air diverters and through plastic radiator surround (fig. 9).
NOTE: be careful not to drill too far and damage radiator or other components. Install push fasteners to retain inboard side of diverters.

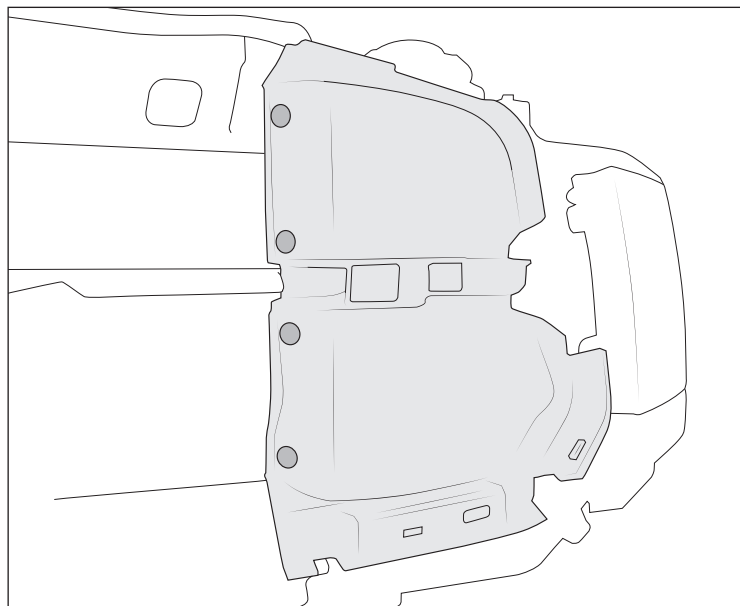


Figure 9



6. Install HD headlamp filler panels. Bolt OEM Mopar headlamp filler panels in place with factory bumper hardware at both ends.

LOWER RADIATOR SHROUD BRACKETS:

NOTE: This section can be performed after bumper installation, but is recommended now because it's easier to access grill and brackets with bumper removed.

1. Using existing outer holes in lower radiator shroud, place lower air diverter-to-grill brackets into shroud as shown (fig.10). The bends in the brackets should angle downward from the grill toward the shroud. Align brackets so they're square to shroud/grill and drill second set of holes in shroud to match the holes in brackets. Use push fasteners to hold brackets loosely in place. Only install push fasteners loosely for now, they will need to be removed before bumper install.
2. Clip grill into place on vehicle. Hardware is not needed because it will be removed again before bumper install.
3. Align lower air diverter brackets to grill and drill 3/16" hole in grill to match brackets.
4. Fasten brackets to grill using provided rivets.
5. Remove loosely installed push fasteners and set aside for use later. Remove grill(with shroud brackets still attached) from vehicle before installing bumper. This will allow better bolt access while installing bumper. Grill, brackets, and fasteners will be reinstalled after bumper installation.

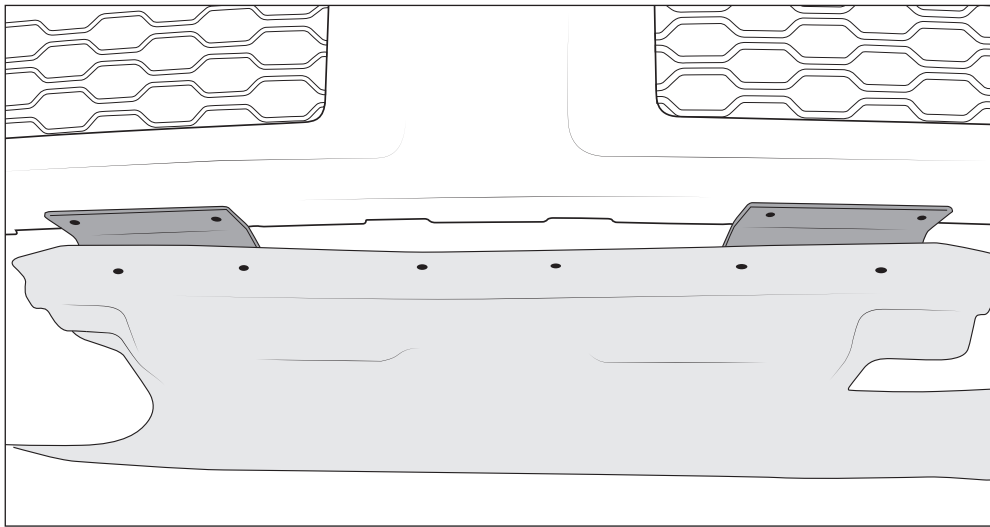


Figure 10



INSTALLATION OF AEV BUMPER

PREPARE AEV BUMPER FOR INSTALLATION:

1. Place inside and outside frame gusset brackets in place on frame rails as shown. Bolt brackets in place using black M12 x 35mm bolts and washers with silver M12 flange nuts on back side. Factory frame slots are slightly undersized in top inside locations so some effort will be required to thread bolts in. At rear ends of slots in frame brackets drill $\frac{3}{8}$ " holes in all 4 locations on frame rails (fig 11).
2. Install $\frac{3}{8}$ " bolts and washers through all 4 frame brackets, through holes in frame, and attach to flag nuts inserted through openings in front frame plates. Remove M12 hardware so bumper can be installed (fig. 11).

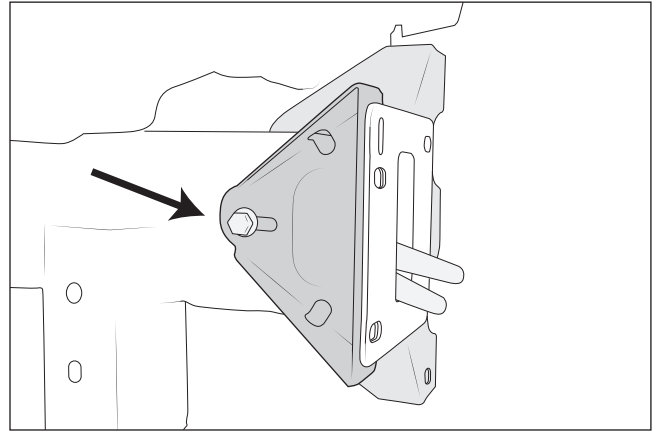
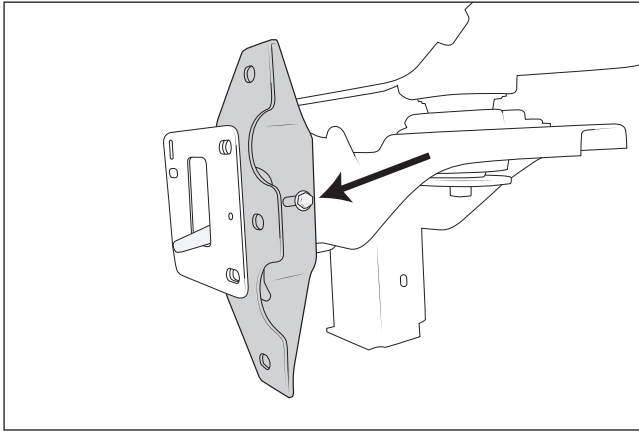


Figure 11 Left: Outside Bracket Right: Inside Bracket

INSTALL BUMPER CENTER SECTION:

1. With a helper, place bumper center on frame end plates and bolt in place using black M12 x 35mm bolts and washers with silver M12 flange nuts on back side (4 per frame horn). Only hand tighten all hardware until told to torque in later step.
2. Install corner tie brackets in place between bumper and outer frame brackets as shown. In only the top 2 holes per side, feed silver M12 x 35mm bolts and washers in from front side through all three brackets, then install flange nuts on back side (fig. 12). Bottom bolts will get installed in next step.

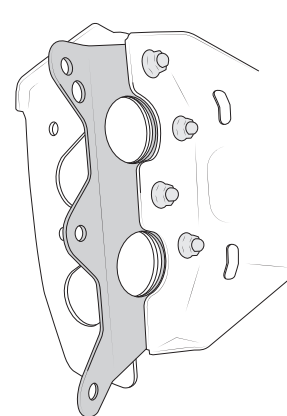
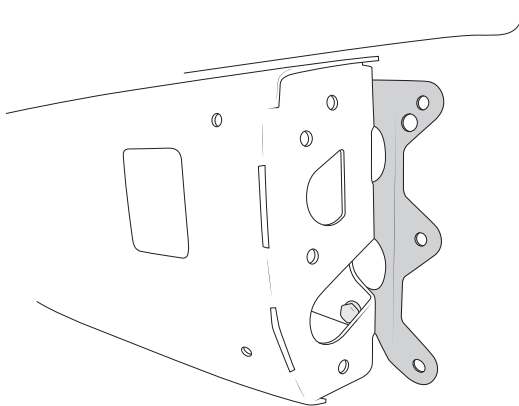


Figure 12 Left: Front View Right: Rear View



3. Install tow/winch reinforcement brackets to bottom of bumper and frame brackets. Front lip of tow reinforcement should sit in front of bumper mounting bracket. Install M12 x 35mm silver bolts, washers, and nuts to bumper bracket. Install M12-1.5 x 40mm fine thread bolt and washers through reinforcement bracket and thread into bottom of compatibility beam. At rear of bracket, install U-bolt over frame and through reinforcement bracket. U-bolt will line up with crumple zone dimples in frame rail. Install 3/8" flange nuts to bottom of U-bolt.

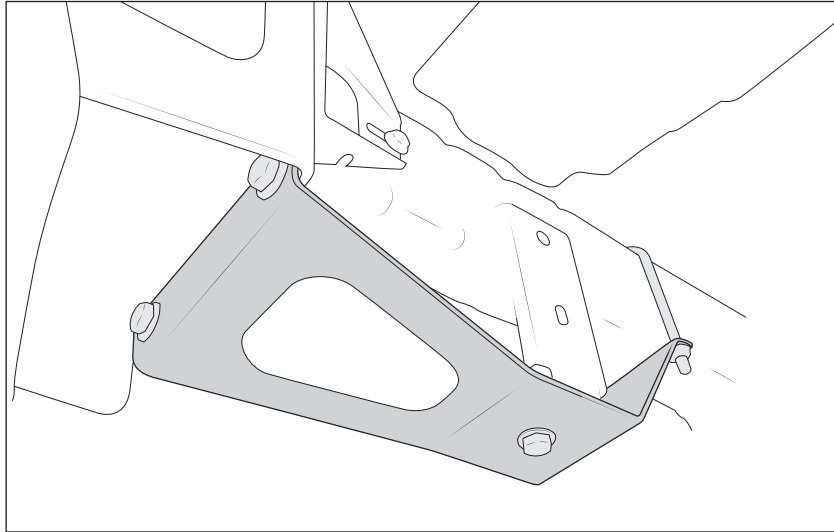


Figure 13

INSTALL BUMPER TOW LOOPS AND CORNERS:

1. Assemble the tow loops and bumper corners with M12 x 70 carriage bolts and push nuts as shown (fig. 14). **NOTE: Start ALL of the bolts through the corner and tow loop before putting the push nuts on.**

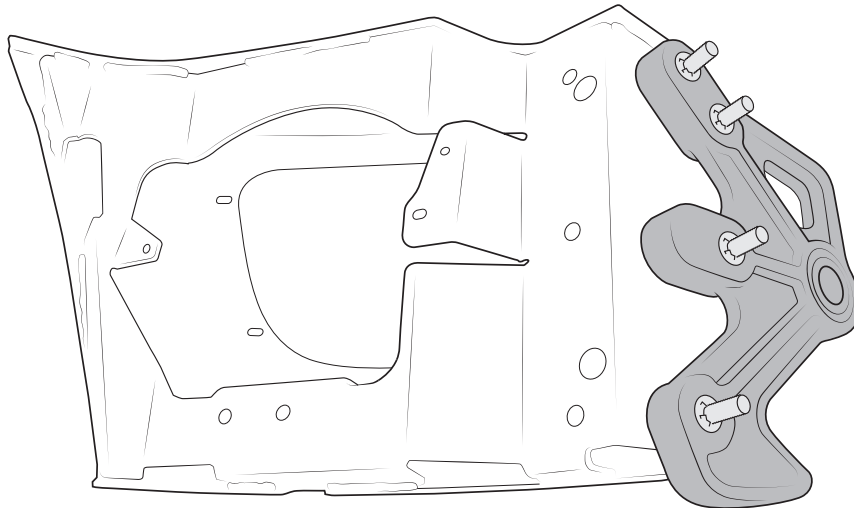


Figure 14



2. Lift the corner assembly onto the bumper center section inserting the four bolts from previous step into the corresponding holes on the bumper center section (fig. 15). Secure with M12 nuts and hand tighten.

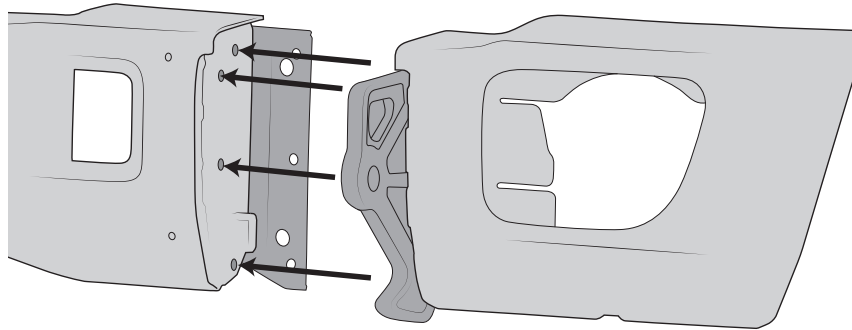


Figure 15

3. Insert three (3) M12 x 35 carriage bolts into the bumper corner pointed toward rear of vehicle, through the holes in the outer frame bracket (fig. 16). Secure with M12 nuts and hand tighten.

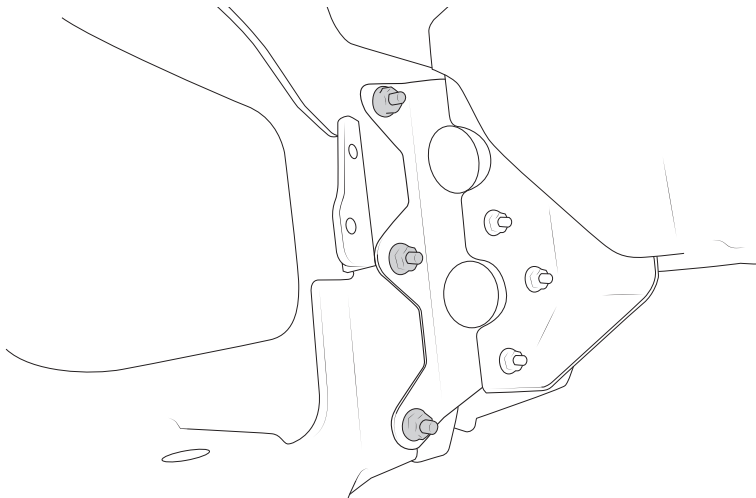


Figure 16

4. Repeat previous 3 steps for opposite side

ADJUST, ALIGN, AND TORQUE:

1. Before installing the tow loop bezels and tube, the bumper must be adjusted and all bolts tightened.
2. Tighten all hardware in order: Center section to brackets, Brackets to frame, Corners to center section.
NOTE: When tightening the corners, tighten the tow hook bolts first. Torque M12 bolts to 70 lb-ft. 3/8" hardware on frame gussets should be torqued to 37 lb-ft, 3/8" U-bolts on winch reinforcement brackets should be torqued to 30 lb-ft.



INSTALL FRONT PARK ASSIST SENSORS (IF APPLICABLE)

NOTE: 1500 owners need to purchase HD bezels from Mopar. QTY 4 Outboard bezels (M-5VS87ZZZAA) and QTY 2 Inboard bezels (M-5VS88ZZZAA).

1. Clean bezel with alcohol then install appropriate bezel (IB to center section, OB to corners) into each bumper hole using black RTV between bezel and bumper (fig 17).

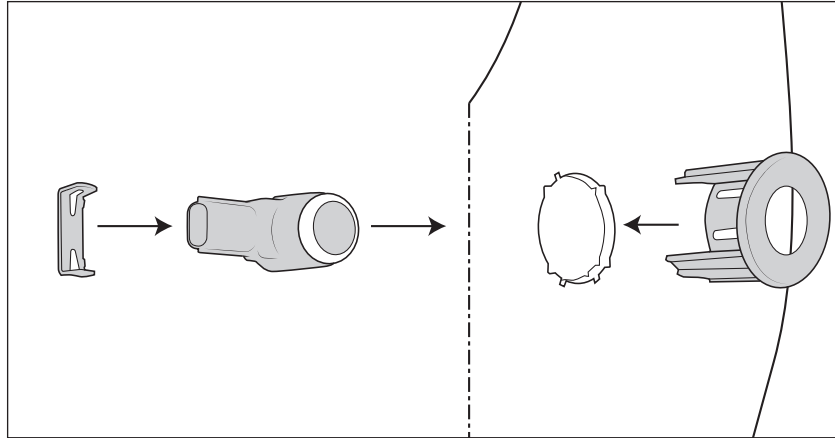


Figure 17

2. Install sensors into the bezels from the back side. Note the orientation of the sensors, the connector end should point in the directions shown (fig.18).

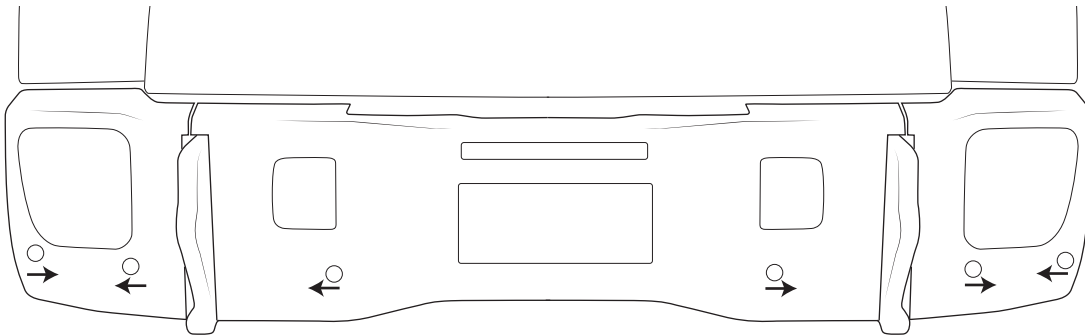


Figure 18

3. Install locking clip onto back of bezel (fig. 19).

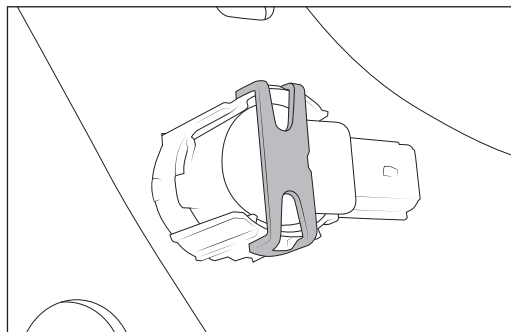


Figure 19

4. The wiring harness for the sensors will need to be lengthened. You may choose to do this yourself or purchase a new harness from AEV (PN: AEV30301049)



INSTALL TOW LOOP BEZELS AND TUBE:

1. Install one side tow loop bezel with M6 x 20 bolts and washers (fig. 20). Hand tighten.
2. Slide the second bezel onto the end of the tube, then position together in place on the bumper (fig 21).

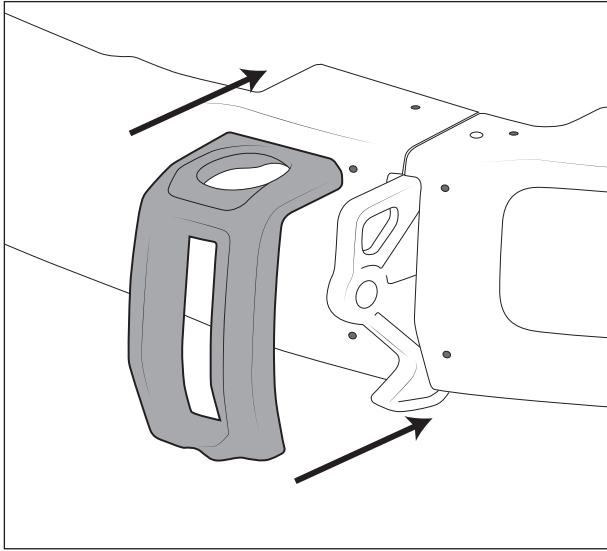


Figure 20

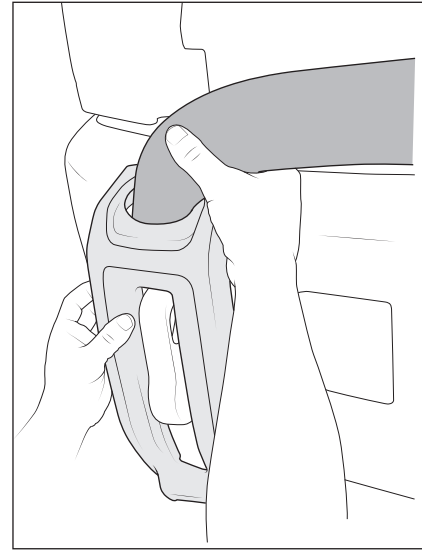


Figure 21

3. Install the M10 x 25 button head bolts and washers to tube hand tight (fig. 22).

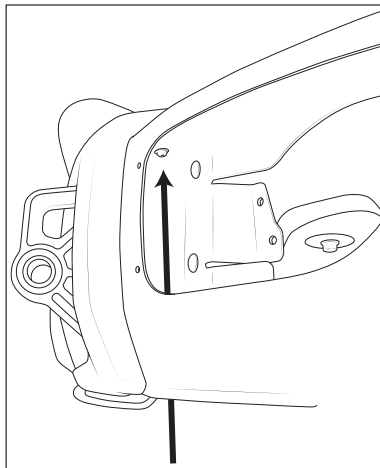


Figure 22

4. Fasten the second tow loop bezel and tighten bolts on both bezels to 9lb-ft.
5. Tighten tube to 30 lb-ft.
6. Re-install the grill with hardware, including push nuts to lower radiator shroud (wait to install grill if installing a winch immediately)



INSTALL VISION X LAMPS:

1. Install AEV light brackets to bumper corners with supplied hardware (fig. 23).

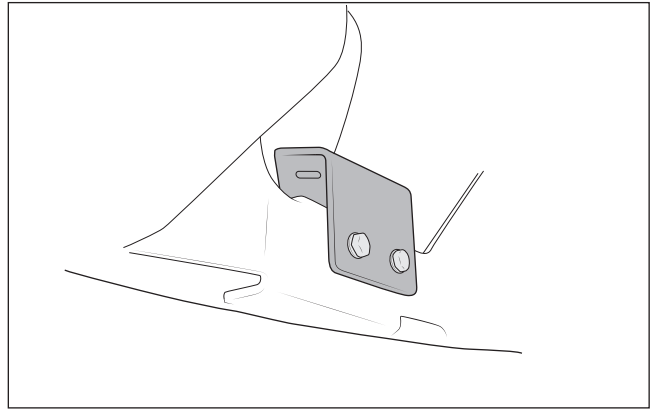
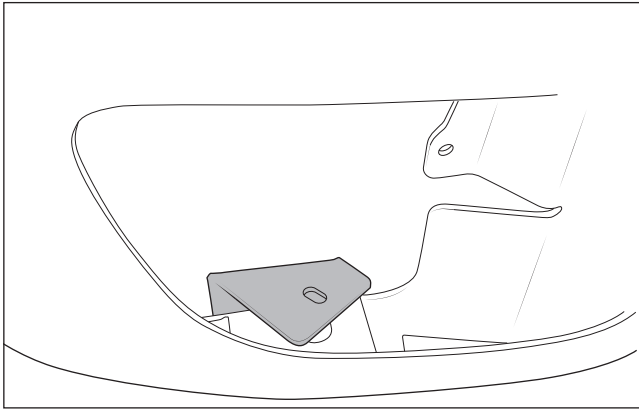


Figure 23

2. Install Vision X lamps hand tight with new supplied M10 nuts.
3. Use the wiring harness and switch included with the Vision X lamps.
4. Aim the lights and tighten all the bolts on the lights. Torque the M8 bolts to 18 lb-ft.

INSTALL LAMP BEZELS:

NOTE: Hold the light bezel up and make sure it doesn't interfere with the light before installing the bezel. Adjust the light as necessary.

1. Clean the backside of the Lamp Bezels with alcohol. Apply approximately 3" long beads of black RTV at all four corners of the bezels (fig. 24).

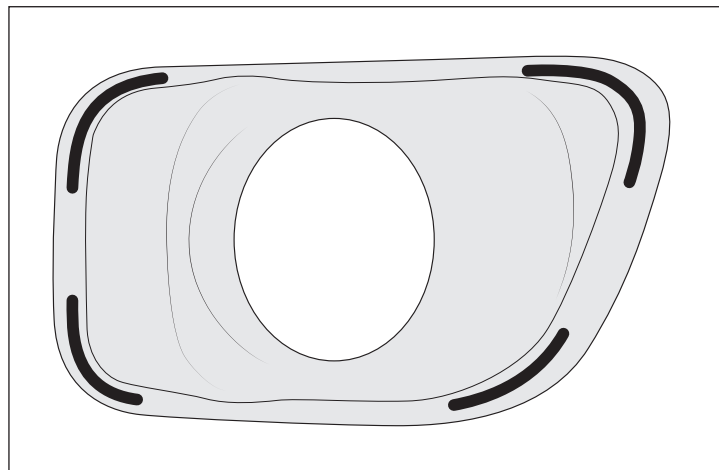


Figure 24



2. Carefully position the bezels on the bumper and press firmly. Use several strips of painter's tape to hold the bezel in place until the RTV cures (fig. 25).

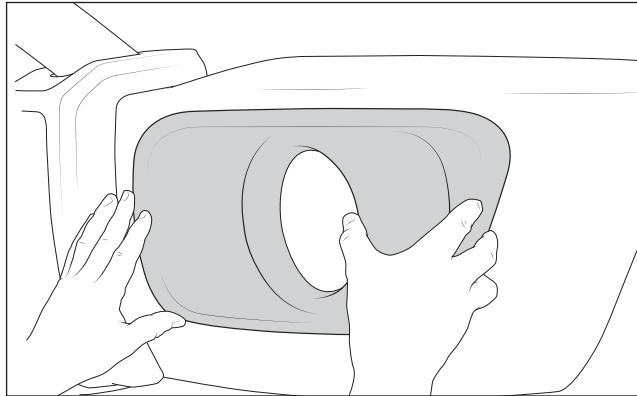


Figure 25

3. If necessary, trim the front edge of both inner fender liners to provide approximately 1/2" gap between the liner and the bumper corner (fig. 26).
4. Install fender liner retainer plates using provided push pins (fig. 27).

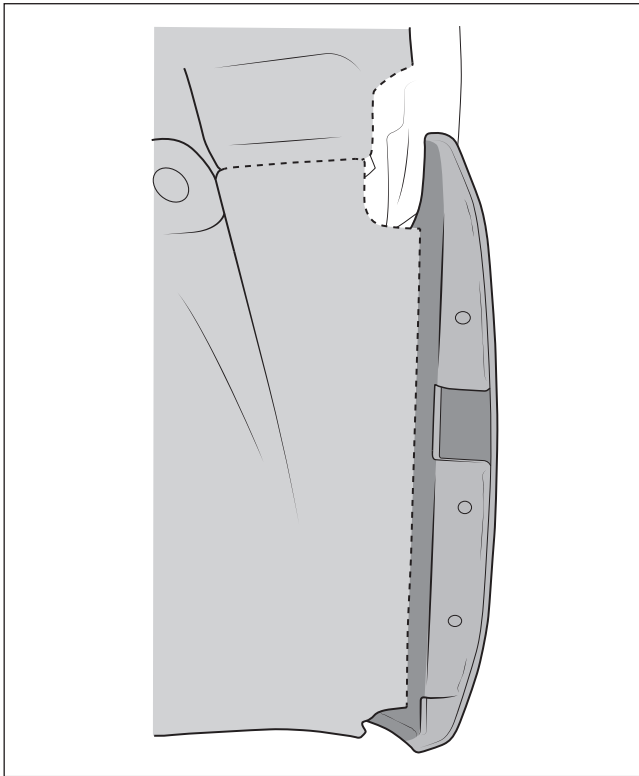


Figure 26

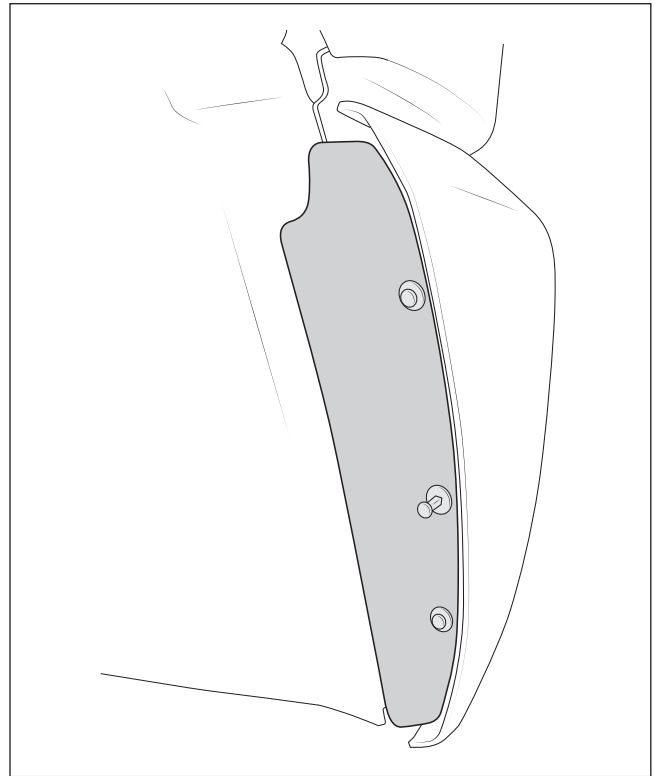


Figure 27



5. Passenger side: Drill $\frac{1}{4}$ " hole as shown through wheel liner and rigid plastic backing (fig.28). Insert Christmas tree fastener through wheel liner side and through plastic backing to retain liner.
6. Driver side: Install bracket as shown using supplied hardware. Use hole in bracket to align drill bit and drill $\frac{1}{4}$ " hole through wheel liner. Insert Christmas tree fastener through wheel liner side and through metal bracket to retain liner (fig. 29).

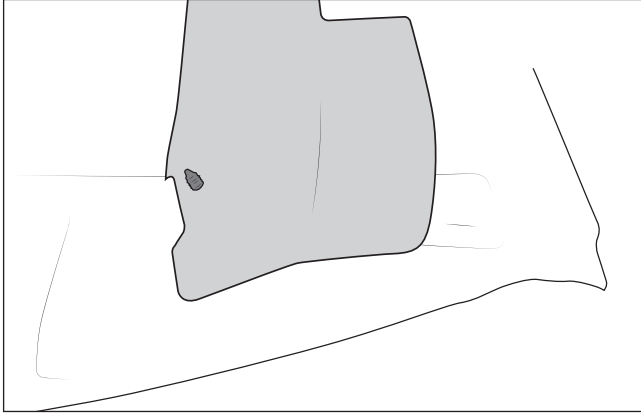


Figure 28

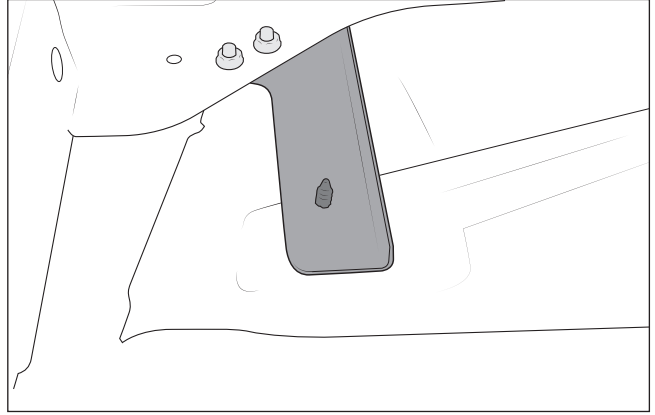


Figure 29

INSTALL GRILL:

NOTE: If installing winch save this step for after winch and cover plate installation. If installing winch delete kit save this step for after blank cover plate installation.

Reinstall grill, retaining hardware, and push fasteners for lower radiator shroud.

WINCH INSTALLATION (OPTIONAL)

Requires Ram 1500 Winch Mounting Kit (PN: 10308500)

Note: due to vehicle limitations, bumper is not designed for winch larger than 10,000 lb capacity. Winch should use synthetic line to reduce weight. Bumper designed for and instructions based on installation of Warn Zeon 10S winch (Warn PN: 89611) with short Control Pack Relocation Kit (Warn PN: 89970).

1. Feed $\frac{1}{2}$ " bolts through holes in fairlead portion of winch bracket so that they point forward (fig. 30).

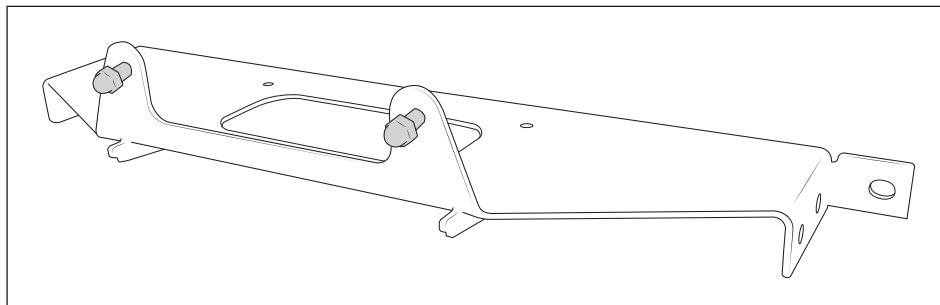


Figure 30



2. Place winch onto winch plate and make sure rope extends forward through fairlead cutout. Secure winch in place using hardware supplied in winch kit.
3. Unbolt 4 screws holding solenoid pack and brace to top of winch.
4. Remove 4 screws holding solenoid pack to brace, then reinstall brace onto winch.
5. Mount bracket supplied in relocation kit to back side of solenoid pack, then attach bracket to winch plate (fig. 31).

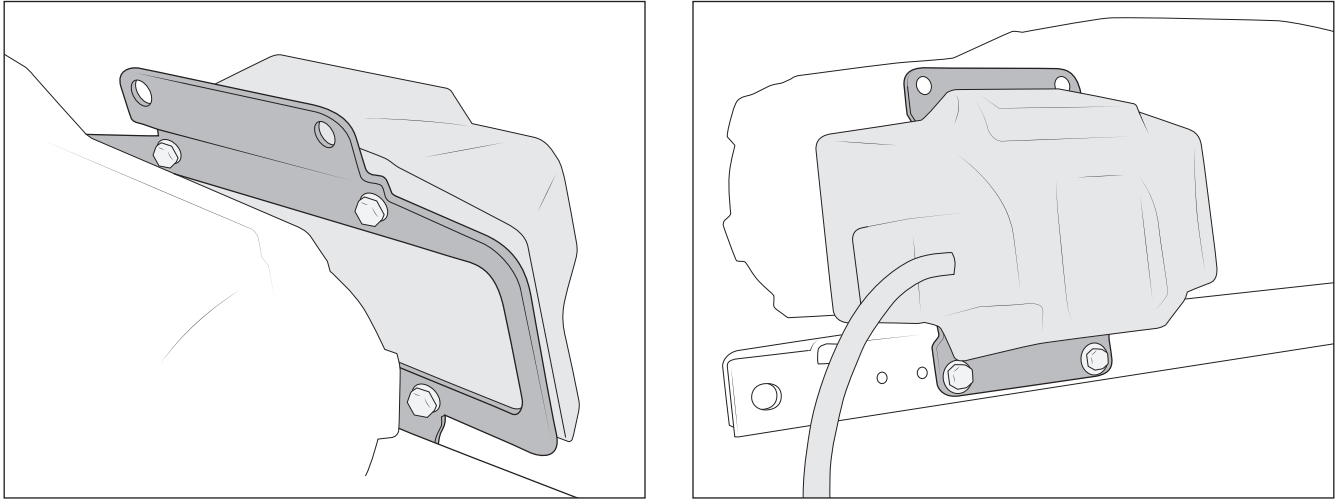


Figure 31

6. Attach wires to winch and solenoid according to manufacturer's instructions (if not already done).
7. Remove bottom inside bolt from bumper bracket/reinforcement plate on both sides (fig. 32).

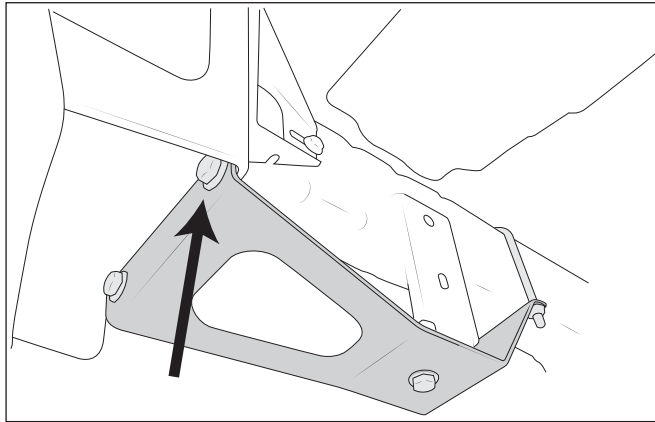


Figure 32



8. Lift winch plate into place on bumper. $\frac{1}{2}$ " bolts in fairlead bracket will pass through holes in fairlead plate on bumper. Tabs on winch plate gussets will lock into square cutouts in fairlead plate on bumper. Reinstall bolts from previous step to attach winch plate to bumper brackets. Install M12 hardware to sides of winch plate to attach it to bumper brackets (2 per side). Torque all M12 hardware to 70 ft-lb. (fig. 33).

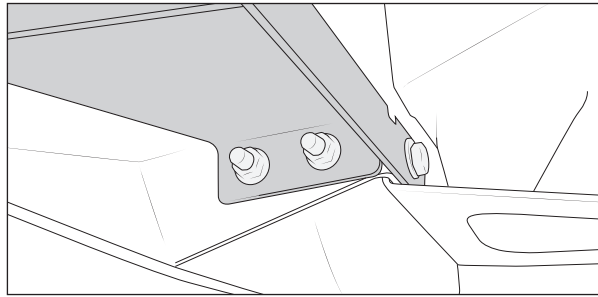


Figure 33

9. Install fairlead to front of bumper and use supplied acorn nuts to fasten it.
10. Route winch wiring safely away from moving parts, sharp edges, and pinch points. Attach electrical connections per winch manufacturer's recommendations.
11. Attach winch remote mounting bracket to top of connector using M5 bolts from winch kit and nuts from AEV hardware kit. To prevent damage to plastic connector, do not overtighten (fig. 34).

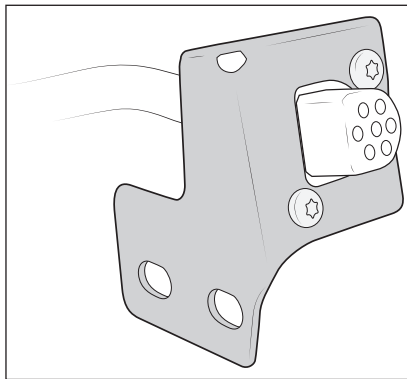


Figure 34

12. Slide winch plug cap into slot on side of winch plate next to D shaped cutout as shown (fig. 35).

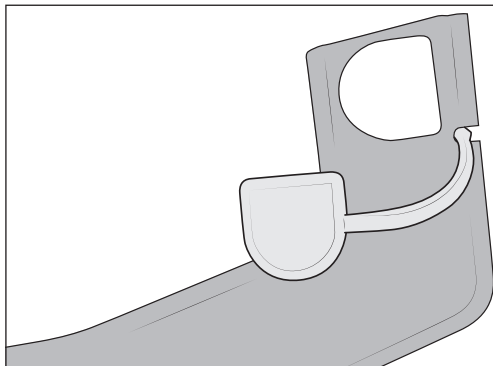


Figure 35



13. Slide winch cover plate and plug into place underneath top face of bumper. Loosely attach front 3 mounting tabs using provided black M8 hardware (fig. 36).

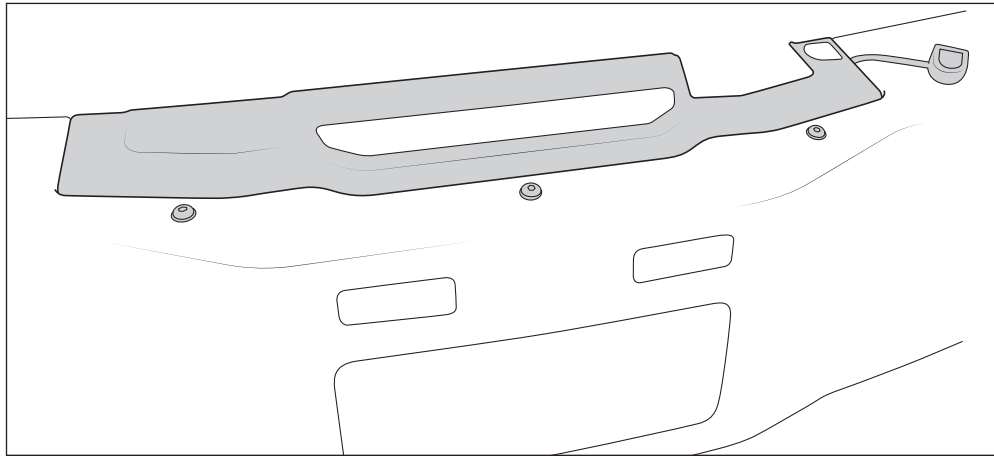


Figure 36

14. Use provided M6 hardware to attach rear mounting points of cover plate to bumper. Driver side hardware should also attach winch remote mounting bracket to inside of winch cover plate (fig. 37). Align remote plug with hole in cover plate and tighten all hardware. Put cap onto winch plug to keep out debris.

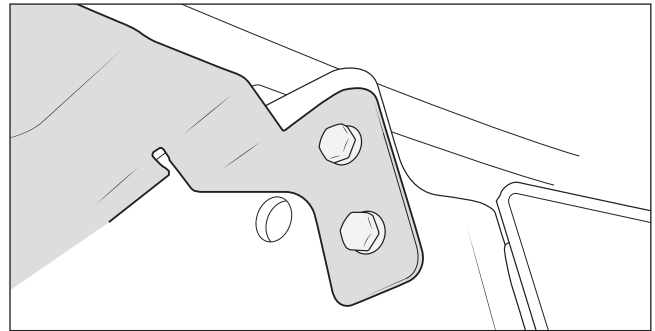
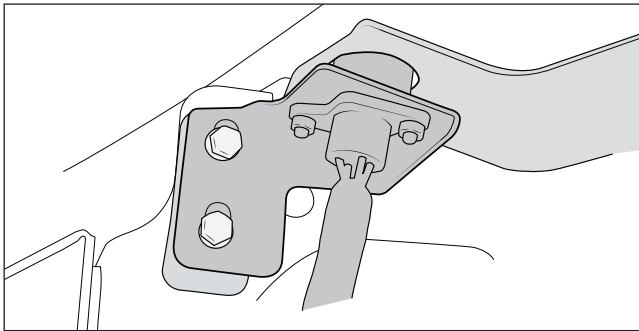


Figure 37

WINCH DELETE KIT (OPTIONAL)

1. Slide winch delete plate into place underneath top face of bumper. Loosely attach front 3 mounting tabs using provided black M8 hardware (see fig. 36).
2. Use provided M6 hardware to attach rear mounting points of delete plate to bumper (see fig. 37).
3. Snap fairlead delete plate into place on bumper face. Make sure the license plate mounting holes are at the top.